Claims

We claim:

1. A hybrid solar energy distribution system comprising:

at least one fiber receiver for receiving visible light further comprising;

a receiver housing,

a mixing rod removably disposed in said receiver housing,

a fiber at least partially disposed in said housing and engaged with said mixing rod, said fiber further transmitting visible light to a light distribution system;

at least one hybrid luminaire;

a means for controlling at least one of said hybrid luminaire and said light distribution system.

2. The hybrid solar energy distribution system of Claim 1 wherein said light distribution system further comprises a fiber distribution panel.

3. The hybrid solar energy distribution system of Claim 1 wherein said hybrid luminaire comprises at least one of the lighting types selected from the group consisting of direct, indirect, cove, spot, compact fluorescent, track, recessed down-lighting, LED, sunlight, and perimeter point source lighting.

4. The hybrid solar energy distribution system of Claim 1 wherein said fiber further comprises a thermally compressed fiber bundle.

5. A hybrid collector comprising;

a primary mirror for producing reflected full spectrum solar radiation,

a secondary mirror supported in position for receiving said reflected full spectrum solar radiation and further filtering said full spectrum solar radiation into visible light that is reflected onto a fiber receiver, said fiber receiver further comprising;

a receiver housing,

a mixing rod removably disposed in said receiver housing,

a fiber at least partially disposed in said housing and engaged with said mixing rod, said fiber further transmitting visible light to a light distribution system.

6. The hybrid collector of Claim 5 wherein said secondary mirror is supported by a secondary mount further comprising;

a non-rigid structure that blocks less than 5% of said reflected full spectrum solar radiation and maintains predetermined optical distances.

7. The hybrid collector of Claim 5 wherein said light distribution system further comprises a fiber distribution panel.

8. The hybrid collector of Claim 5 wherein said fiber further comprises a thermally compressed fiber bundle.

9. The hybrid collector of Claim 5 wherein multiple collectors are positioned in a mirror farm array connected to a single sun tracking system.

10. The hybrid collector of Claim 5 wherein said primary mirror is segmented into multiple sections.

11. The hybrid collector of Claim 5 wherein said secondary mirror is segmented into multiple sections.

12. The hybrid collector of Claim 5 wherein said primary mirror and secondary mirror are segmented into multiple sections.